REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested. Claims 1, 2, 4-40, 42-64 are presently active in this case, Claims 7-35, 42-64 previously withdrawn from consideration, and Claims 1, 2, 4 and 36 amended and Claims 3, 41 and 65-82 canceled by way of the present amendment.

In the outstanding Official Action, Claims 1, 4, 5, 36 and 39 were rejected under 35 U.S.C. § 102(b) as being unpatentable over the publication "Multiple distributed feedback operation at 1.55μm with uniform output powers in a single laser diode" to Talneau et al.; Claims 1, 36-41, and 65-69 were rejected under 35 U.S.C. § 103(a) as being unpatantable over U.S. Patent No. 6,363,097 B1 to Link et al. in view of U.S. Patent 6, 544,626 to Yoon et al. and further in view of Talneau et al. Claim 2-4 were rejected under 35 U.S.C. § 103(a) as being unpatantable over Link et al., Yoon et al. and Talneau et al., and further in view of "High Power 1550nm distributed feedback lasers with 440mW CW output power for telecommunication applications" to Menna et al.; and Claim 6 was objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

First, Applicants wish to thank Examiner Mondt for the August 5, 2004 personal interview at which time the outstanding issues in this case were discussed. During the interview, Applicants presented amendments and arguments substantially as indicated in this response with respect to a full width at half maximum power being $\leq$ 3nm. While no formal agreement was reached, Examiner Mondt indicated that these amendments and arguments appear to overcome the outstanding rejection based on Talneau et al., but further search would be needed before this case can be allowed.

In addition, Applicants wish to thank Examiner Mondt for the indication of allowable subject matter in Claims 6. Applicants wish to maintain Claim 6 in dependent form,

however, because Applicants believe that amended Claim 1, from which Claim 6 depends, patentably defines over the cited references.

With regard to the claims withdrawn from consideration, as discussed in the August 5th interview, Examiner Mondt took the position in the April 13, 2004 interview that independent Claims 1 and 36 are no longer generic to withdrawn Claims 65-82 and should be canceled. Therefore, Claims 65-82 have been canceled without prejudice. Applicants note that, as also discussed in the April 13, 2004 interview, withdrawn claims 7-35 and 42-64 depend from independent Claims 1 and 36. Therefore, Claims 1 and 36 remain generic to Claims 7-35 and 42-64, even as amended herein.

Turning now to the merits, in order to expedite issuance of a patent in this case, Applicants have amended independent Claims 1 and 36 to clarify the patentable distinctions of the present invention over the cited references. Specifically, Applicants' Claim 1 as amended recites a semiconductor laser device including an active layer configured to radiate light and a diffraction grating position within the semiconductor laser device. Also recited is that the semiconductor laser device is configured to emit a light beam, the light beam having a plurality of longitudnal modes within a full width half maximum power $\leq$3nm of a oscillation wavelength spectrum of the semiconductor laser device. An exemplary representation of the output of the inventive laser is shown in Figure 4 of the present specification, which shows a plurality of adjacent Fabry-Perot modes being selected for output oscillation. While the selected oscillation modes are not necessarily adjacent due to loss of an intervening mode, Figure 4 demonstrates that closely grouped Fabry-Perot modes within a spectrum $\leq$3nm are selected for the multiple mode output in accordance with the present invention.

In contrast, the cited reference to Talneau et al. discloses a single laser diode having simultaneous operation at different wavelengths. As discussed in the August 5th interview,

the Talneau et al. device is designed to provide several communications signal wavelengths for a WDM system and, therefore, provides a relatively large spacing between output wavelengths in order to avoid interference between WDM channels. Thus, as seen in Figure 2 of Talneau et al., the wavelength outputs are selected modes that are widely spaced with unselected modes interposed therebetween. That is, the Talneau et al., structure does not select a group of closely spaced Fabry-Perot modes for output. Specifically, as seen in Figure 2 and described in Talneau et al., the laser outputs of this reference are spaced 3.86 nm apart. Thus, the laser outputs of Talneau et al. are not provided within a full width half maximum power $\leq$3nm of an oscillation wavelength spectrum of the semiconductor laser device, as now recited in Claims 1 and 36. Thus, Applicants' Claims 1 and 36 patentably define over Talneau et al.

Moreover, the secondary references cited in the Official Action do not correct the deficiencies of Talneau et al. Link et al. discloses a semiconductor laser with a rewritable wavelength stabilizer that includes a laser mirror made of a grating written into a photorefractive material, in which the oscillation wavelength of a laser diode is determined by the period of grating. However, as stated at column 1, lines 11-21, the laser of Link et al. is a single longitudnal mode laser. Yoon et al. discloses a Fabry-Perot laser that provides a light output having multiple longitudnal modes. However, this multiple mode output results from Fabry-Perot oscillations and not from any selection device such as a diffraction grating. Finally, the cited reference to Menna et al. is cited for its teaching of a low reflectivity of its facets does not discuss a multimode feature. Thus, the cited references to Link et al., Yoon et al. and Menna et al. do not disclose a semiconductor laser device is configured to emit a light beam, said light beam having a plurality of longitudinal modes within a full width half maximum power $\leq$3nm of an oscillation wavelength spectrum of the semiconductor laser device.

In addition to the full width half maximum power $\leq$3nm limitation discussed above, Applicants have also amended Claims 1 and 36 to recite a resonant cavity positioned within the laser device and configured to oscillate the light of the active layer, and that a length of the resonant cavity is at least 800μm. In contrast, the Talneau et al. reference discloses a laser cavity having a length of 600μm. Thus, the cavity length limitation of Claims 1 and 36 provides a further basis of patentability of the present claims over the cited reference Talneau et al. Moreover, the remaining cited references do not correct the deficiencies of Talneau et al.

Thus, Applicants' Claims 1 and 36 patentable define over the cited references. Moreover, as Claims 2-35 and 37-64 depend from Claims 1 and 36 respectively, these claims also patentable define over the cited references.

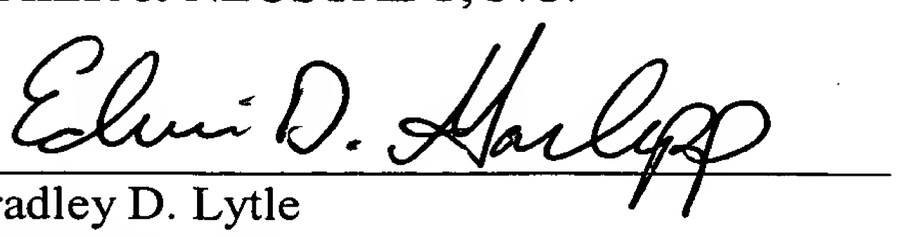
Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application and the present application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/03)

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Bradley D. Lytle
Registration No. 40,073

Edwin D. Garlepp
Registration No. 45,330

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